A

substrate

dielectric layer

electrode

coulomb force
(Johnsen-Rahbek force)

B

substrate

coulomb force
(Johnsen-Rahbek force)

electrode

−   +

C

substrate

electrode

−   +   −   +

gradient force

C'

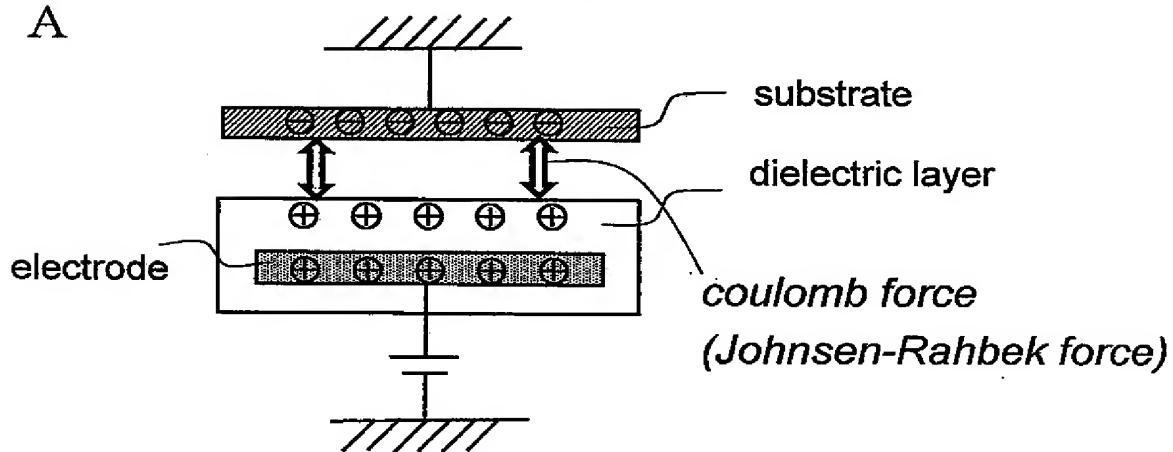substrate

First electrode

gradient force
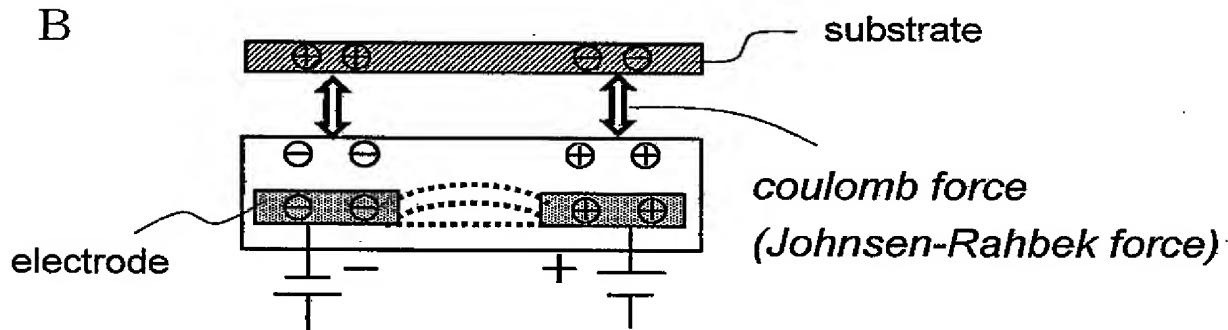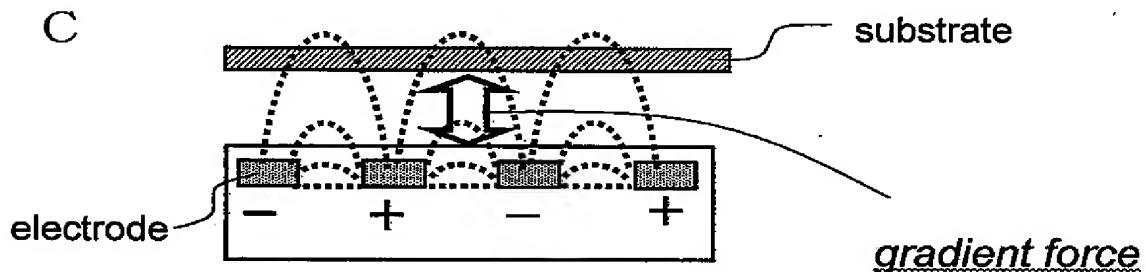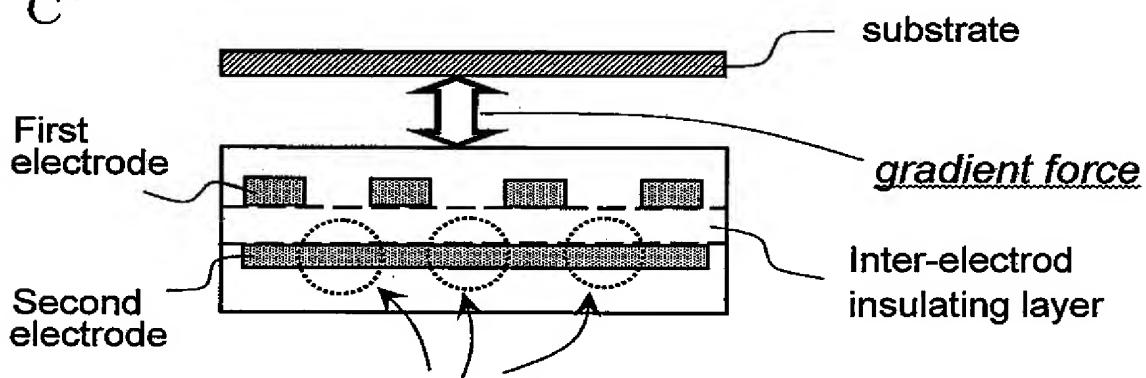
Second electrode

Inter-electrod insulating layer

"areas that are not overlapped
with the first electrode"